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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,216	07/30/2003	Ki-Ho Jung	678-1227 (P10918)	8774
66547 7590 07/30/2007 THE FARRELL LAW FIRM, P.C. 333 EARLE OVINGTON BOULEVARD SUITE 701 UNIONDALE, NY 11553			EXAMINER GHEBRETINSAE, TEMESGHEN	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 07/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/630,216

Applicant(s)

JUNG ET AL.

Examiner

Temesghen Ghebretinsae

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 15-18 is/are allowed.
- 6) ☒ Claim(s) 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/16/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 7-10 and 11-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not have support for "distributing the parallel data stream and the at least one operator bit (output from the operator (120) or (1714) equally to the encoders and block coding" as claimed in claim 7, and "a plurality of encoders, each for receiving an equal number of the parallel data streams and the at least one operator bit" as claimed in claim 11. See specification paragraph {0098}. The second encoder is the only one receiving the parity bit or input operator data.

Claim Objections

4. Claim 7 is objected to because of the following informalities: in claim 7, the phrase "wherein t is the number of encoders" is not clear. Appropriate correction is required.

Allowable Subject Matter

5. Claims 1-6 and 15-18 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to anticipate or render obvious the claimed a transmitter for reducing the peak-to-average power ratio (PAPR) of a signal transmitted on $N (=2 \cdot \sup{r})$ sub-carriers in a transmitting apparatus including encoders for block coding w input data, where r is a natural number more than 2, and outputting N code symbols in an orthogonal frequency division multiplexing (OFDM) communication system, the transmitter comprising: a serial to parallel (S/P) converter for converting a data stream into $w \cdot (r-2)$ parallel data streams, where w is the length of an information word; a first encoder for receiving $w/2$ parallel data streams of the $w \cdot (r-2)$ parallel data streams from the serial to parallel converter, block coding the $w/2$ parallel data streams, and outputting $N/2$ first code symbols; *in combination with a **second encoder for receiving the parallel data streams from the serial to parallel converter not input into the first encoder and the $(r-2)$ input operator data streams, block coding the received data streams, and outputting $N/2$ second code symbols, an input operator generator for generating $(r-2)$ input operator data streams according to***

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the $w-(r-2)$ parallel data streams wherein the $(r-2)$ input operator data streams

make N code symbols complementary as claimed in claim 1; and

A receiver for demodulating decoded data streams $k_{\text{sub}.1}$, $k_{\text{sub}.2}$, . . . , $k_{\text{sub}.2r}$ in a receiving apparatus including a serial to parallel converter for converting a serial input signal in to parallel data streams where r is a natural number more than 2, and a Fourier transformer for Fourier-transforming the parallel data streams in an orthogonal frequency division multiplexing (OFDM) mobile communication system, the receiver comprising: a plurality of decoders, each for receiving an equal number of Fourier-transformed complementary sequences and decoding the received complementary sequences; *in combination with* an operator remover for identifying at least one operator bit $k_{\text{sub}.r+3}$, . . . , $k_{\text{sub}.2r}$ from the decoded data streams and removing the at least one operator bit from the decoded data streams; and a demapper for recovering source data from information data streams $k_{\text{sub}.1}$, $k_{\text{sub}.2}$, . . . , $k_{\text{sub}.r+2}$ free of the at least one operator bit as claimed in claim 17.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temesghen Ghebretinsae whose telephone number is 571-272-3017. The examiner can normally be reached on Monday-Friday from 8 to 6. The examiner can also be reached on alternate.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Temesghen Ghebretinsae
Primary Examiner
Art Unit 2611

TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER

T.Ghebretinsae

7/10/07.